South Carolina

Because…

We All Live Downstream

Chapter 4 - Household Wastewater

Managing Your Home Septic System

Why Be Concerned?

- Over 50% of SC residents have septic systems
- If not properly maintained, they can cause significant water quality problems
- Leaking systems contain dangerous bacteria which threaten human health and the health of the environment
- A failing system will cost thousands to clean up

Covered In This Chapter

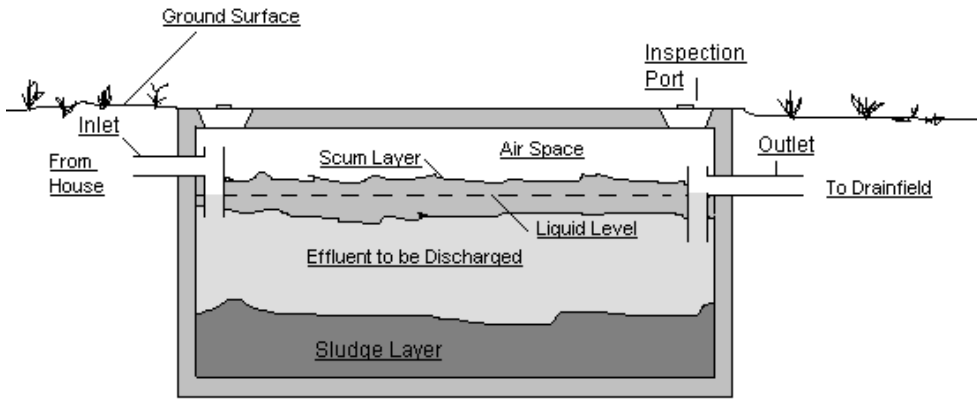
- Design and location
- Determining the right size
- Maintenance
- Special concerns for coastal areas

Before You Begin...

- Do you have a septic system?
- How do you know?
- Are you hooked up to a municipal wastewater system?

The Septic Tank

- Wastewater flows out of house into the tank
- Material settles out, by weight
- Bacteria in the tank break down sludge into simple nutrients, gas, and water
- Effluent then move out to the drainfield
- Solids accumulate until they are pumped out



The Parts of a Septic Tank

Design and Location

- Review property before you buy
  - Are there gullies or steep slopes?
  - Is the land prone to flooding?
  - Does the land contain designated wetlands?
  - Are there utility or road easements?
  - Is there enough space for house, driveway, well **AND** septic system
- The location of the septic system **takes priority** over the location of the house and other improvements
  - To ensure that the best soils are being used to treat the wastewater

Design and Location

- Be sure to get all the proper permits
  - contact info on page 52
- Does tank capacity match needs?
  - 3/4 bedroom house = 1,000 gallon tank
  - each additional bedroom = 250 gallons
- Be aware of requirements for vacation rental homes
- In order to get electrical power to your new home, septic system must get approval from DHEC

Septic System Design and Location

Risk Assessment Table 4.1 - Chapter 4

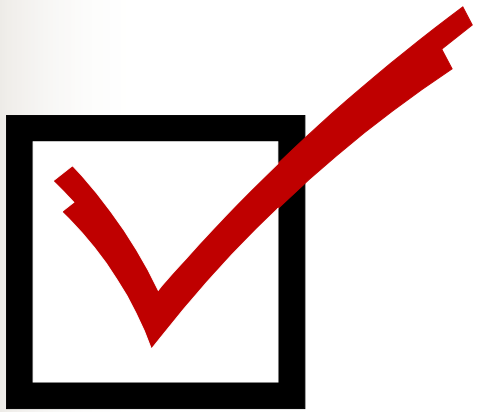
	LOW RISK	MEDIUM RISK	HIGH RISK	YOUR RISK
Planning a new home	Before purchasing property for a home, I had a comprehensive site evaluation done by the county health department to determine whether the property was suitable for a septic system. I investigated the type and cost of system needed for the property.	I walked the property myself to determine whether any obvious limitations existed to prevent my getting a septic system permit.	I purchased property for a home without investigating my wastewater disposal needs and options.	❑ Low ❑ Medium ❑ High
Installation	I had a licensed septic system contractor install my system.	I had an unlicensed person install my system.	I installed my own septic system.	❑ Low ❑ Medium ❑ High
Inspecting an existing system	Before purchasing an existing home with a septic system, I had the system evaluated by a professional.	Before purchasing an existing home, I asked the homeowner questions about the septic system location and what maintenance and repairs had been done.	I didn't even know the home had a septic system before I bought it OR I didn't ask any questions about the septic system.	❑ Low ❑ Medium ❑ High
Capacity of system	Tank is designed to handle more wastewater than required, based on the size of the home.	Capacity just meets load requirements, but I watch out for factors indicating system overload. Water conservation measures are taken.	Bathrooms, bedrooms or water-using appliances are added without reexamining the capacity of the wastewater system.	❑ Low ❑ Medium ❑ High
Separation distance	Drainfield is located farther than the required separation distance from any well or surface water.	Drainfield is located at the required separation distance from any well or surface water.	Drainfield is located closer than the required separation distance from any well or surface water.	❑ Low ❑ Medium ❑ High

Maintenance

- Three (3) important reasons for maintaining your septic system

1. Health of your pocketbook
   - expensive repairs = thousands of $
   - pumpout costs between $150 - $250
2. Health of your family, community and coastal environment
   - untreated sewage contains bacteria and viruses
   - can affect wells, groundwater and surface water
3. Health of the local economy
   - closes shellfish beds and recreational areas
   - quality of life and tourism may decline

Maintenance Do's

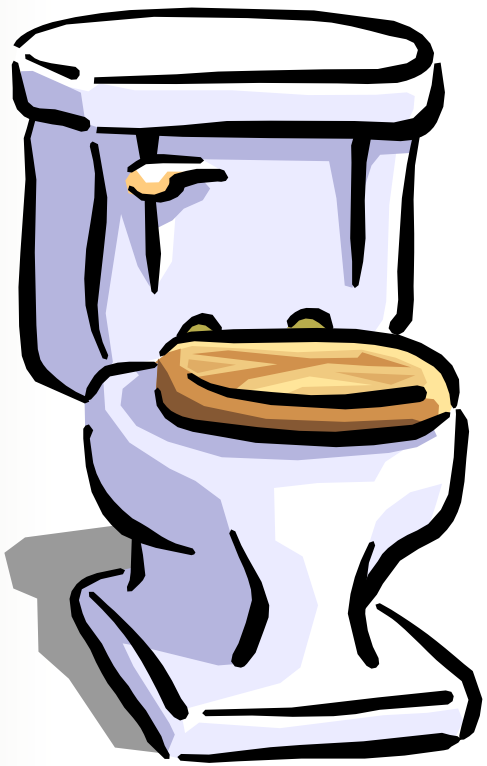


- Conserve water to reduce the amount of wastewater to be treated
- Repair leaking faucets or toilets
- Divert downspouts away from your septic drainfield
- Keep your septic tank cover accessible
- Keep detailed records of repairs or maintenance performed, including pumpouts

Maintenance Don’ts

- Don’t drive over the drainfield
- Don’t dig in the drainfield or cover it with any hard surface like a driveway or sidewalk
- Don’t poison the septic system by disposing of harsh chemicals, cleansers or fuels down the drain
- Don’t waste money on septic system additives
- Don’t put in a separate pipe to carry wash waters (sink and washing machine) to a nearby ditch

Never Flush...



- coffee grounds
- dental floss
- paints, varnishes
- thinners
- cigarette butts
- kitty litter
- waste oils
- pesticides
- paper towels
- disposable diapers

Symptoms of a Failing System

- sewage backs up in your drains and toilets
- sinks, bathtubs and toilets drain slowly
- lush, green grass grows over the drainfield, even in dry weather
- unpleasant odors are noticed around your house
- well water tests show the presence of nitrates or bacteria

Frequently Asked Questions...

Q **What are some specific coastal concerns?**

A **Shallow groundwater, sandy soils, proximity to sensitive areas,**

Q **How often should I have my tank pumped out?**

A **Every 3 - 5 years is recommended for typical use**

Q **Can I still have a garbage disposal?**

A **Yes - just try to think like your tank!!**

Septic System Maintenance

Risk Assessment Table 4.2 - Chapter 4

	LOW RISK	MEDIUM RISK	HIGH RISK	YOUR RISK
System failure	I contact a licensed septic tank contractor or the county health department when I suspect my septic system is failing.	I periodically notice signs of failure, such as during and after a heavy rain, but choose not to investigate further or have the problem fixed. Instead, I alleviate the problem by not using my system during those periods of failure.	I continue to use my septic system despite obvious signs of failure.	❑ Low ❑ Medium ❑ High
Age of system	System is 5 years old or less.	System is between 6 and 20 years old.	System is more than 20 years old.	❑ Low ❑ Medium ❑ High
Effluent filter	An effluent filter is installed and cleaned regularly.	An effluent filter is installed but not cleaned often enough.	There is no effluent filter installed on the septic tank outlet.	❑ Low ❑ Medium ❑ High
Safety devices	An alarm on the pumping chamber or holding tank indicates that the tank is full or power has been cut off to the pump.		There is no alarm to indicate tank overflow or that power has been cut off to the pump.	❑ Low ❑ High
Septic tank additives	I never use septic tank additives.	I use biological additives to "re-seed" my tank after having it pumped.	I use additives on a regular basis as a replacement to pumping.	❑ Low ❑ Medium ❑ High

Action Checklist - Septic Systems

Write all high and medium risks below.	What can you do to reduce the risk?	Set a target date for action.
Sample: *I've never had my septic system inspected or pumped out.*	*Consult the Yellow Pages for a licensed septic system contractor and call for an inspection appointment.*	*Within 48 hours: By April 10*

- I drive over my drainfield frequently
- I plant woody ornamentals near my drainfield
- I use chemical additives
- Others?